Draft Environmental Assessment

Dungeness River – Dungeness Meadows Levee
Rehabilitation of Flood Control Works
Clallam County, Washington

May 2005

US Army Corps
of Engineers®
Seattle District

Dungeness Meadows Levee
Rehabilitation of Flood Control Works
Draft Environmental Assessment
March 2005

Responsible Agency: The responsible agency for rehabilitation of flood control works is the U.S. Army Corps of Engineers, Seattle District.

Abstract:

This Environmental Assessment (EA) evaluates the environmental effects of the proposed repair and reconstruction of the Dungeness Meadows levee, located on the Dungeness River near Sequim, Washington. This levee is on the right bank at approximately River Mile 7.98 to 8.6, near the town of Dungeness. The levee protects 126 residential structures in the community of the Dungeness Meadows Homeowners Association as well as 3 public structures, approximately 13,000 feet of roads and streets, and recreational facilities. The U.S. Army Corps of Engineers, Seattle District, (Corps) is proposing the following project under the authority of Public Law 84-99 (33 USCA 701n). The Dungeness Meadows levee was damaged during an estimated 14-year flood event that occurred in October of 2003. On 11 November 2003, the Corps responded to a request for emergency assistance under the PL84-99 program from the Dungeness Meadows Home Owners Association to assess and repair a damaged area of Dungeness Meadows levee. The Corps has determined that the levee is in need of permanent repair and is proposing a two-phase project to repair approximately a 600-foot section of the levee to the pre-flood condition.

The proposed project will not constitute a major federal action significantly affecting the quality of the human environment.

This document is also available online at:
http://www.nws.usace.army.mil/ers/envirdocs.html

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1. INTRODUCTION

This Environmental Assessment (EA) evaluates the environmental effects of the proposed repair and reconstruction of approximately 600 linear feet of the Dungeness Meadows Levee. The levee is located along the right bank of the Dungeness River, immediately adjacent to the Dungeness Meadows Homeowners Association, extending from about river mile 7.98 to 8.6, near the town of Dungeness, in Clallam County, Washington. The levee is composed of earthen material with a riprap face. It is used for erosion control on the riverward side with a crest width of 12 to eighteen feet to facilitate maintenance and has side slopes of 2H: 1V on the riverward side and on the landward side. The levee provides flood protection for residential property and public infrastructure. In the undamaged condition, the levee would prevent damages from a flood with a 100-year recurrence interval with a high degree of certainty.

A 600 linear-foot section of the levee toe was damaged during the flood events of October 2003. Armor rock was lost and slopes were damaged over the entire length of this section. Without repair, erosion and scour would likely continue during the next high water event, potentially causing levee failure. In its damaged state, the levee provides protection up to a 15-year event.

In the fall of 2004 while in the early stages of planning a PL84-99 levee repair, the Corps determined that because of a substantial risk of failure of the levee in the next high water event, the existing levee damage required immediate repair in order to guarantee the safety of the residents of the Dungeness Meadows community. Through coordination with the Jamestown S'Klallam Tribe, the Washington Department of Fish and Wildlife (WDFW), NOAA Fisheries, and the US Fish and Wildlife Service (USFWS), an interim fix (Phase 1) was designed that would temporarily reduce the threat of levee failure by placing rock only in the dry to avoid impacting fish life. The interim fix was successfully constructed in November 2004 (see Section 2.1). A permanent repair (Phase 2) is scheduled for construction in July 2005, within the approved in-water work window created by WDFW, and will restore the levee to the pre-flood condition.

This proposed Phase 2 repair will fix the approximate 600 feet of erosion by reworking the 2004 interim repair to a stable slope, replacing the toe lost during past flood events, and adding up to an additional 500 cubic yards of riprap.

The proposed work is not expected to significantly affect the quality of the human environment because the damaged section of shoreline will be returned to the pre-flood condition as built in place.

1.1 Location and Setting

The project is located along the right bank of the Dungeness River extending from about river mile 7.98 to 8.6, within the community of Dungeness Meadows, in Clallam County, Washington. A general location map can be found in Figure 1.

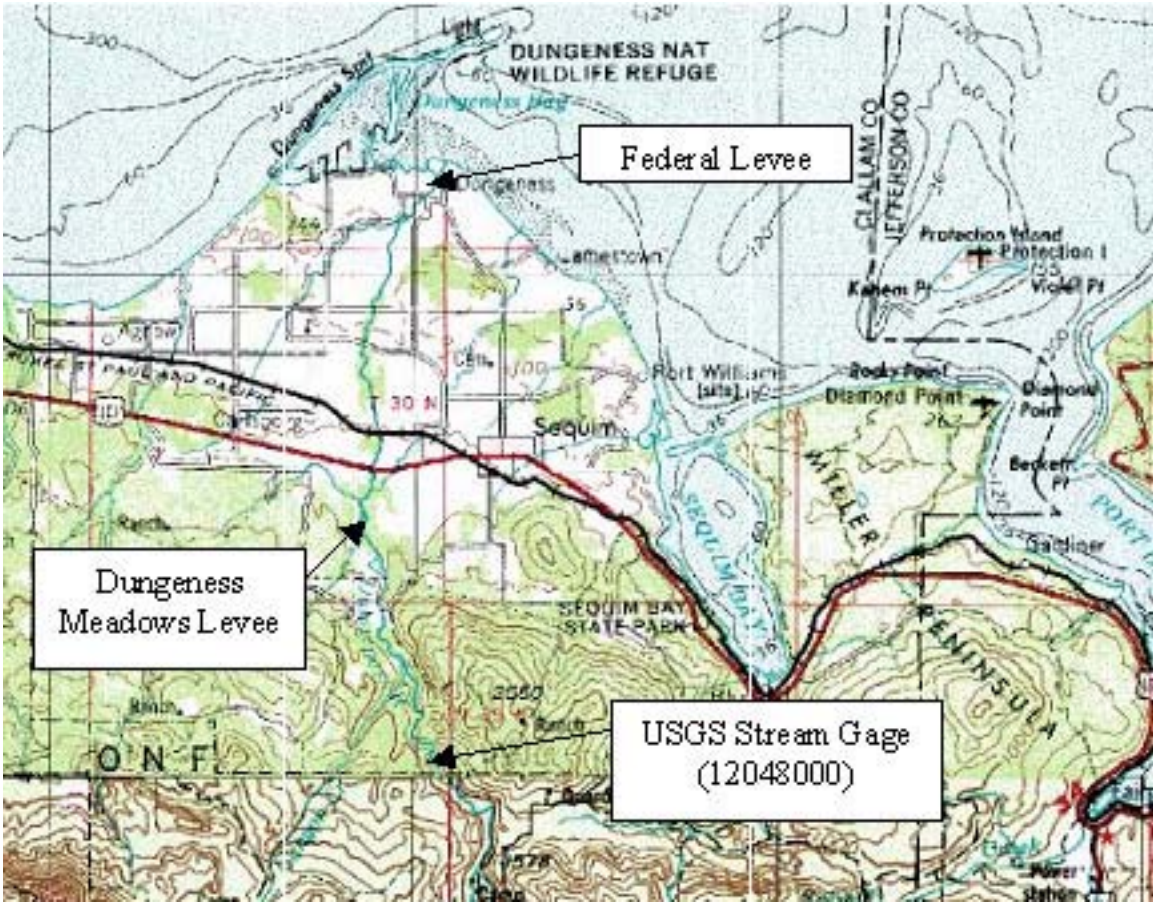


Figure 1. Project Location

1.2 Background

The project was originally constructed by local interests in 1964 to protect the Dungeness Meadows residents. The levee failed in the late 1970s and was rebuilt in 1980 and rehabilitated in 1981 and 1986. The Dungeness Meadows Home Owners Association performs routine maintenance including the removal of vegetation and thinning or removal of trees that would jeopardize levee integrity.

Two consecutive storms occurred in 2003 on 16 October and 20 October, which led to flooding on the Dungeness River. Although the first flood event did not cause the Dungeness River to surpass flood stages, it provided a saturated condition that easily allowed the second event to exceed flood conditions. The severe rains were the result of a high velocity jet stream from the southwest that brought warm pockets of moisture to the Pacific Northwest. This common weather pattern is often referred to as the Pineapple Express. During this flood event the levee sustained significant damage by erosion for approximately 600 linear feet along the river right in this location. Armor rock was lost and portions of the levee core were exposed.

On 11 November 2003, the Dungeness Meadows Homeowners Association contacted the Corps requesting assistance evaluating damage to the levee and requesting repair assistance (Appendix A). Corps personnel traveled in December 2003 to the site to evaluate the situation and

determined that a PL84-99 levee repair project was needed to permanently repair an approximate 600-foot section of the levee.

The Corps determined that toe loss at levee has resulted in vertical slopes approximately five feet high. It was estimated that the toe loss present in December 2003 reduced the current level of protection to a 15-yr flood event with zero freeboard.

Despite the recognized need for the levee to be repaired, complications arose with the Dungeness Meadows Homeowners Association acting as a local sponsor, which resulted in a delay of the Corps receiving project funding until September of 2004.

1.3 Project Purpose and Need

The purpose of this project is to provide protection to the community and infrastructure from flood damage. This section of the levee sustained significant damage by erosion during a flood event in October 2003 and a request for assistance from the Dungeness Meadows Homeowners Association was received in November 2003.

1.4 Authority

The Dungeness Meadows Levee Rehabilitation is authorized by Public Law 84-99 (33 USCA 701n). Corps rehabilitation and restoration work under this authority is limited to flood control works damaged or destroyed by flood. The rehabilitated structure will normally be designed to provide the same degree of protection as the original structure. This project has been authorized as having *emergency* status as stated under the PL 84-99 regulations. The Corps has determined that if the levee is not repaired by the next flood event, an *imminent threat* of loss of private and/or public property exists.

1.5 Action Area

The action area includes the 600 feet project repair area and extends from the project site approximately 500 feet upstream and downstream for aquatic species and includes a 3/4-mile radius from the project area for terrestrial species. Staging will be accomplished at the work site, and access will be obtained using existing levee access road and from existing paved roads through the Dungeness Meadows Homeowners Association.

2. DESCRIPTION OF THE ALTERNATIVES

2.1 Preferred Alternative

The Corps proposes to permanently repair the section of the levee that was damaged during the October 2003 flood event by completing a *two-phase* construction. A phased approach to construction was discussed and selected by the Corps, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, and the Jamestown

S'Klallam Tribe in November 2004 in order to provide immediate flood protection for the community, and at the same time, provide the necessary protection to sensitive fish life.

From 11-23 November 2004, *Phase 1* construction consisted of an interim measure that placed approximately 3000 cubic yards of Class V riprap along the existing levee in the dry (no in-water work). This stacking of rock temporarily raised the level of flood protection in the previously damaged area and essentially created a launchable toe (which consists of rock perched on the river bank that could naturally reposition in a flood event to provide bank and scour protection). By avoiding any in-water work and therefore avoiding increased turbidity, this phase of construction eliminated the effects to Puget Sound Chinook redds that were located in the river in the project reach as well eliminated the effects to other sensitive salmonids.

Phase 2 construction consists of re-working the existing riprap and Phase 1 interim repair and possibly adding up to an additional 500 cubic yards of riprap to restore the levee prism and toe to the pre-flood condition. The project area will also be planted with native willow plantings to improve fish habitat. Phase 2 construction is scheduled to occur during the summer 2005 Washington Department of Fish and Wildlife approved in-water work window commencing on July 15 with an expected duration of approximately seven days.

A project drawing is located in Appendix C. Access to the site will not require the construction of any additional roads, as roads currently exist throughout the Dungeness Meadows community as well as a gravel road on top of the levee. However, during construction the gravel road on top of the levee may need to have a small amount of gravel added to ensure safe access for vehicles and pedestrians.

2.2 Non-Selected Alternatives

Several other alternative actions were considered before the recommended alternative was selected. These alternatives include:

- No Federal Action (the No-Action Alternative),
- the Non-Structural Alternative,
- the Immediate Repair Alternative

In order for any alternative to be acceptable for consideration it must meet certain objectives. The alternative must afford flood protection similar to the rest of the levee segment, it must be economically justified, it should be environmentally acceptable, and it should minimize costs for both the sponsor and the Federal government

2.2.1 No Federal Action

The No-Action alternative would provide no federal action and leave the levee in its currently damaged condition with no further action to repair the levee damage. This alternative was quickly discarded because of the high potential of additional flood damages.

2.2.1.1 *Effects of No Federal Action*.

With no Corps assistance, the bank erosion would continue, the levee could breach and threaten the Dungeness Meadows community. Significant damage to commercial and residential structures, public utility infrastructure, and roads would occur.

2.2.2 Non-Structural Alternative

The Non-Structural alternative would buy out the existing residential community and would also relocate any necessary public infrastructure. This alternative was discarded because the costs were deemed too high compared to the costs for other alternatives. In addition, the PL84-99 Authority dictates that the levee will be repaired to its pre-flood condition.

2.2.3 Immediate-Repair Alternative

The Immediate-Repair Alternative would repair the erosion and return the levee to its pre-flood condition without delaying construction because of consideration to fish and wildlife species. While this alternative would restore the levee protection immediately to the pre-flood level, it would not utilize the Washington Department of Fish and Wildlife recommended project construction windows and would possibly have adverse effects on fish and wildlife species. This alternative was therefore discarded because of the resulting adverse environmental consequences.

3. AFFECTED ENVIRONMENT

3.1 General

At high flows, the active channel in this reach has broad meander bends upstream and downstream of Dungeness Meadows Levee and a long, straight section adjacent to the levee. The active channel appears to have had a more sinuous pattern with shorter and tighter bends before the levee was built. At low flows, water is conveyed in multiple, branching channels that are separated by unvegetated bars. The Dungeness River provides spawning and rearing for all pacific salmon including Chinook (*Oncorchynchus tshawytscha*), coho (*O. kisutch*), chum (*O. keta*), pink (*O. gorbuscha*), perhaps sockeye (*O. nerka*), and steelhead (*O. mykiss*). Chinook spawning is concentrated in this reach and juvenile rearing could occur through the reach although the preferred riparian vegetation and complex river habitat features are absent in this reach.

The following threatened species are expected to be found in the project area:

Puget Sound Chinook salmon
Hood Canal Summer-run salmon
Coastal/Puget Sound Bull trout
Bald Eagle

3.2 Hydrology, Soils and Topography

At high flows, the active channel in this reach has broad meander bends upstream and downstream of Dungeness Meadows Levee and a long, straight section adjacent to the levee. The active channel appears to have had a more sinuous pattern with shorter and tighter bends before the levee was built. At low flows, water is conveyed in multiple, branching channels that are separated by unvegetated bars. A spring-fed tributary and side channel, referred to as Spring Creek, cuts across a low, vegetated terrace on the east side of the river near the downstream end of the Dungeness Meadows Levee. Spring Creek continues at least another 0.1 mi (0.2 km) downstream and connects with the Dawley side channel, the next major downstream side channel. Other channels are visible on the right in the Dungeness Meadows subdivision and these were likely side channels before the development. Presently, houses are built along the banks of this channel. This channel is separated from the main channel by a vegetated terrace. Presently, the Dungeness Meadows Levee cuts off the upstream end of this channel and access by fish can only occur from the downstream end. Water in the channel originates from groundwater flow. Adjacent to the Dungeness Meadows Levee, the bars appeared to be elevated relative to bars in other areas of the river. Vegetated bars are primarily present as longitudinal and point bars. Vegetated mid-channel bars are present only at the upstream and downstream ends of the Dungeness Meadows Levee. The bank on the east side of the prehistoric flood plain and the one on the west side downstream of about RM 7 are mostly well defined by high terraces that are estimated to be Pleistocene in age. The bank on the west side upstream of about RM 7 is poorly defined by irregular and intermittent risers of low terraces that are probably Holocene in age (Bureau of Reclamation, 2002).

3.3 Vegetation

The project site is located next to the Dungeness Meadows community. Little vegetation exists along the project site as the Dungeness Meadows Homeowners Association has routinely removed it. Some vegetation the vicinity of the project site is limited to that which occurs near the river. These species include:

- cottonwood (*Populus angustifolia)*
- red-osier dogwood (*Cornus sericea*),
- Nootka rose (*Rosa nutkana*),
- salmonberry (*Rubus spectabilis*),
- snowberry (*Magnoliopsida dilleniida*),
- red alder (*Alnus rubra*),
- Alaskan cedar (*Chamaecyparis nootkatensis*),
- Himalayan blackberry (*Rubus discolor*),
- evergreen blackberry (*Rubus laciniatus*),
- Douglas fir (*Pseudotsuga menziesii*)
- willow (*Salix spp.*) and
- a variety of native and non-native grasses.

The most prominent species at the project site are Himalayan blackberry and willow.

3.4 Fish and Wildlife

The Dungeness River supports several species of salmon and trout. Trout species occasionally present include bull trout, Dolly Varden, steelhead and cutthroat trout. The salmon species are Chinook (*Oncorchynchus tshawytscha*), coho (*O. kisutch*), chum (*O. keta*), pink (*O. gorbuscha*), and perhaps sockeye (*O. nerka*).

Minimal wildlife is expected to be found near the project site prior to construction. Small birds and mammals may feed on existing blackberry patches.

3.5 Threatened and Endangered Species

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed and proposed threatened or endangered species. Four species listed as either threatened or endangered are potentially found in the area of the project, and are listed in Table 1.

Table 1. Endangered Species in the Project Vicinity

Species	Listing Status	Critical Habitat
Bald Eagle *Haliaeetus leucocephalus*	Threatened	—
Coastal/Puget Sound Bull Trout *Salvelinus confluentus*	Threatened	Designated
Puget Sound Chinook Salmon *Oncorhynchus tshawytscha*	Threatened	Designated
Hood Canal Summer-run Chum Salmon *Oncorhynchus keta*	Threatened	Designated
Puget Sound/Strait of Georgia Coho Salmon *Oncorhynchus kisutch*	Candidate	—

Bald eagle is listed as threatened in Washington pursuant to the Endangered Species Act and can be found in coastal areas. According to the WDFW priority habitat and species database, no identified bald eagle nests are located within a mile of the project site.

Bull trout /Dolly Varden in the Dungeness River have been identified as a distinct stock based on their geographic distribution. Anadromous, fluvial and resident life history forms may be present. Spawning timing and locations are unknown. Anecdotal angler reports state that historically bull trout/Dolly Varden were very common and widespread from the lower to the upper watershed. Angler reports also state bull trout are still widespread, but greatly reduced in numbers

Puget Sound Chinook Salmon,
The Dungeness River Chinook stock has been classified as Critical, because escapement has declined to an annual average of 200 spawners in recent years. Degrading spawning and rearing habitat, extensive river water withdrawals during low water flows leading to passage problems,

reduced spawning habitat, and suspected overfishing are probable contributors to the decline in the Dungeness system.

Spawning begins in August and continues until mid-October. This project is located within a spawning reach for Chinook salmon. The majority of the Dungeness Chinook stock spawn within several miles of the project site. Redd surveys conducted by WDFW and the Jamestown S'Klallam Tribe in the fall of 2004 revealed that several Chinook redds were located in the proximity of the damaged levee.

Coho salmon within the Puget Sound/Strait of Georgia ESU are presently classified as a "candidate" for ESA listing. Candidate species are species that may be proposed or are under review for possible listing as a threatened or endangered species in the future. In its ESA status review, the Biological Review Team stated that although many coho populations within this ESU are abundant and apparently stable, there are a number of factors (high harvest rates, habitat degradation, and hatchery production) that may lead to substantial risks to whatever native production remains. The Biological Review Team stated that if the population continues to decline, this ESU is likely to become endangered in the foreseeable future.

3.6 Cultural Resources

There are no known cultural resources in the project area. The disturbed nature of the levee and bank material (imported fill, sediment deposited from the river, or dredged from the river) significantly reduces the chance of finding cultural resources. A cultural resources survey was conducted in the repair area and a cultural resource report was prepared as part of the Section 106 of the National Historic Preservation Act compliance process. A letter from the State Historic Preservation Officer concurring with the Corps finding of No Historic Properties Affected dated 19 July 2004 was received. The construction contract would contain a stop work clause to notify the appropriate officials if evidence of cultural or human artifacts were unearthed.

3.7 Water Quality

In the lower Dungeness River, ground water and surface water are closely related especially during low-flow periods. Drainages connected or adjacent to the Dungeness River have two different primary sources of flow - dependent upon their size and the location of their headwaters. The larger drainages begin in the Olympic Mountains and foothills and their flow is primarily from snowmelt and precipitation. Examples of this type of drainage, other than the Dungeness River itself, are Siebert Creek and McDonald Creek. In these drainages, flows are highest in the winter and spring. The smaller drainages begin in the lower foothills or piedmont and their flow is primarily from groundwater recharge and irrigation return flow. Examples of this type of drainage are Bell Creek, Cassalery Creek, Gierin Creek, Hurd Creek, and Meadowbrook Creek. The flows in these drainages are relatively constant throughout the year (Bureau of Reclamation, 2002).

Withdrawal from ground-water wells for domestic use occurs year-round. Irrigation has increased ground-water recharge and has created an artificially high water table. Whereas agriculture needs dominated water use before the late 1970s, residential needs are now primary.

Therefore, withdrawals directly from the river for irrigation have been decreasing and withdrawals from ground-water wells have been increasing (Bureau of Reclamation, 2002).

3.8 Air Quality and Noise

Air quality in the Dungeness Basin is generally good. However, urban areas experience moderately degraded air quality during certain times of the year. Motor vehicles are the largest source of air pollutants in Clallam County, although wood-burning stoves also contribute. Particulates, sulfur dioxide, ozone, and carbon monoxide are the pollutants of concern. High concentrations of these pollutants generally occur during the dry, late summer months when minimal wind conditions persist for long periods of time or during mid-winter thermal inversions.

Carbon monoxide, a product of incomplete combustion, is generated by automobiles and other fuel burning activities (e.g. residential heating with wood). The highest ambient concentrations of carbon monoxide tend to occur in localized areas such as major roadways and intersections during periods of low temperatures, light winds, and stable atmospheric conditions. Ozone is a highly reactive form of oxygen created by sunlight-activated chemical reactions of nitrogen oxides and volatile organic compounds. Unlike high carbon monoxide concentrations, which tend to occur close to emission sources, ozone problems tend to be regional since ozone precursors can be transported far from their sources. Motor vehicle engines primarily generate ozone precursors.

This rural area is typically quiet. Typical existing noise consists of those generated by farm machinery, trucks, automobiles, and other internal combustion engines (Bureau of Reclamation, 2002).

3.9 Utilities and Public Services

The levee protects 126 residential structures in the community of the Dungeness Meadows Homeowners Association as well as 3 public structures, approximately 13,000 feet of roads and streets, and recreational facilities.

3.10 Land Use

Land use in the project area is primarily residential.

3.11 Recreation

Recreational uses of the Dungeness River at the project site are seasonal and moderate. They include, but are not limited to, wildlife observation, photography, walking, hiking, fishing and boating. A golf course is also located with the Dungeness Meadows Homeowners Association property.

3.12 Hazardous, Toxic, and Radioactive Waste

There are no known sites at the project locations that have any hazardous, toxic, or radioactive waste.

3.13 Aesthetics

Along the Dungeness River, the landscape elements of landform, vegetation, water, color, and related factors have been impaired by the levees and residential use of adjacent land. Scenery and visual attractions are limited to the river corridor over this reach of the river.

4. EFFECTS OF THE ALTERNATIVES

4.1 General

4.1.1 Proposed Alternative

Due to the timing of construction (anticipated to last seven days beginning on or after July 15 and concluding before August 15) and design of the levee, no long-term impacts to the environment are anticipated. Because the project is restoring the levee to the pre-flood condition, any effects to fish and wildlife will be temporary and primarily occur during construction. These impacts would likely include minor, temporary, and discountable increases in noise and turbidity. Additional willow plantings added to the site will increase some fish and wildlife habitat values.

4.1.2 No-Action Alternative

The No-Action alternative would not create any noise, it would not disrupt salmonid movement, it would not result in willows being planted and it would not provide the desired flood protection.

4.2 Hydrology, Soils and Topography

4.2.1 Proposed Alternative

No significant changes to the hydrology, soils, and topography are anticipated by repairing the levee and replacing lost armor rock, as the project will only restore the levee to the pre-flood condition. The construction project will only place rock within the existing footprint of the levee.

4.2.2 No-Action Alternative

The No-Action alternative would not repair the damaged levee and increasing the likelihood that the levee would breach. A breach in the levee could significantly alter the hydrology in the area.

4.3 Vegetation

4.3.1 Proposed Alternative

Currently very little vegetation is present on the riverward slope of the levee and the Corps anticipates that a few small willows and blackberries will constitute the total vegetation to be removed from the riverward slope.

The riverward slope of the levee will incorporate willow cuttings into the design. Overall project effects to vegetation will be insignificant as the existing vegetation is very limited. In addition, our replanting efforts will increase vegetation in the project area. The Corps will also work with the DMHA to ensure that some vegetation is allowed to grow on the levee while still complying with maintenance standards, which prevent large plants from jeopardizing the structural integrity of the levee.

4.3.2 No-Action Alternative

The No-Action alternative would result in the levee being temporarily devoid of vegetation and would likely result in the project area being populated with Japanese knotweed and Himalayan blackberry.

4.4 Fish and Wildlife

4.4.1 Proposed Alternative

Effects to fish and wildlife, if any, will be temporary and occur primarily during construction. The addition of the willow plantings that will be added to the site may increase some fish habitat values. .

4.4.2 No-Action Alternative

No effects anticipated as a result of the No-Action alternative.

4.5 Threatened and Endangered Species

4.5.1 Proposed Alternative

Bald Eagle

A Biological Assessment (BA) was prepared and submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service in May 2005. The BA addressed the expected effect of the project on bald eagles and made a "no effect" determination.

Coastal/Puget Sound Bull Trout

Best management practices to reduce or eliminate the possibility of turbidity during construction will be implemented. This determination is based upon the low likelihood that bull trout would be present in the action area during construction activities and the potential positive benefits attributed to the willow plantings. All in-water work will occur during the approved WDFW construction window. The project will restore the levee to the pre-flood conditions as well as improve the existing bull trout habitat by planting willows along the repair stretch.

Puget Sound Chinook Salmon
Because this alternative chose to delay construction until the July 2005 construction window, it is not anticipated to adversely affect chinook as construction is scheduled to occur after expected juvenile Chinook out-migration and prior to adult Chinook entering the river. Best management practices to reduce or eliminate the possibility of turbidity during construction will be implemented. Willow plantings incorporated into the rockwork will benefit Chinook and other salmonids.

Coho salmon
The procedure to repair the levee was designed to avoid or minimize potential "take" during construction, including constructing the levee without requiring in water work and scheduling the work to be conducted during the in-water construction period to avoid periods of greatest coho vulnerability and highest expected use.

4.5.2 No-Action

No effects anticipated as a result of the No-Action alternative.

4.6 Cultural Resources

4.6.1 Proposed Alternative

A cultural resources survey was conducted in the repair area and a cultural resource report was prepared as part of the Section 106 of the National Historic Preservation Act compliance process. A letter from the State Historic Preservation Officer concurring with the Corps finding of No Historic Properties Affected dated 19 July 2004 was received. The construction contract will contain a stop work clause to notify the appropriate officials if evidence of cultural or human artifacts is unearthed.

4.6.2 No-Action Alternative

No effects anticipated as a result of the No-Action alternative.

4.7 Water Quality

4.7.1 Proposed Alternative

Water quality will not be significantly impacted by construction activities as limited in water work (replacing the toe) is planned. Equipment drive-trains will not enter the water and would remain on dry ground at all times. During construction, best management practices for equipment operation and storage and use of hazardous materials would be employed. No leakage or spills of hazardous materials are expected to occur and a spill response plan will be in place in the event there is a spill.

According to the Code of Federal Regulations, Title 33, Section 323.4 (a) (2) levee repair is an activity not prohibited by or otherwise subject to regulation under Section 404 of the Clean Water Act. Therefore, a section 401 Water Quality Certification is not required.

4.7.2 No-Action Alternative

It is likely that if the project is not constructed the levee will fail during the upcoming flood season, resulting in an increase in turbidity in the Dungeness River.

4.8 Air Quality and Noise

4.8.1 Proposed Alternative

Air quality would meet the standards as set forth by the Washington Department of Ecology and would not be permanently affected by the construction of the project. Noise would be intermittent at the site and varied depending on the frequency of trucks arriving with the material and construction of the identified features. Noise disruption factors were considered for their effect on threatened and endangered species in the ESA document.

During construction, there would be temporary and localized reduction in air quality due to emissions from heavy machinery operating during fill placement, and grading. These emissions would not exceed EPA's de minimis threshold levels (100 tons/year for carbon monoxide and 50 tons/year for ozone) or affect the implementation of Washington's Clean Air Act implementation plan. Therefore, impacts would not be significant.

Ambient noise levels would increase slightly while construction equipment was operating. However, these effects would be temporary and localized, and occur only during daylight working hours. As a result, impacts would be insignificant.

4.8.2 No-Action Alternative

No effects anticipated as a result of the No-Action alternative.

4.9 Utilities and Public Services

4.9.1 Proposed Alternative

Failure to repair the levee could have a serious impact on local commercial and private citizens through increased flood damage to homes, roads, and other commercial and residential infrastructure. Construction vehicles associated with the project would have a minimal disruption due to increased truck traffic merging, turning and traveling together with local traffic. Such a disruption would be temporary and highly localized, and therefore impacts would be insignificant.

4.9.2 No-Action Alternative

The No-Action alternative would not result in an increase in traffic on the local roads, and it would not result in providing the desired flood protection to public infrastructure.

4.10 Land Use

4.10.1 Proposed Alternative

The proposed project will not cause any changes to current to land use.

4.10.2 No-Action Alternative

No effects anticipated as a result of the No-Action alternative.

4.11 Recreation

4.11.1 Proposed Alternative

The proposed project will help protect the recreational facilities located within the Dungeness Meadows community including the golf course, pool, and walking trails.

4.11.2 No-Action Alternative

If the levee is not repaired, future damage could occur to the golf course and swimming pool located within the Dungeness Meadows community.

4.12 Hazardous, Toxic, and Radioactive Waste

4.12.1 Proposed Alternative

There are no known sites at the project locations that have any hazardous, toxic, or radioactive waste; therefore, the Corps does not anticipate any effect.

4.12.2 No-Action Alternative

No effects anticipated as a result of the No-Action alternative.

4.13 Aesthetics

4.13.1 Proposed Alternative

Restoration of the constructed features of the project will not significantly affect the aesthetics of the site or the river.

4.13.2 No-Action Proposed Alternative Aesthetics

No effects anticipated as a result of the No-Action alternative.

5. UNAVOIDABLE ADVERSE EFFECTS

Unavoidable adverse effects associated with this project include:

(1) a temporary and localized increase in noise, which may disrupt wildlife in the area,
(2) a temporary and localized disruption of local traffic by construction vehicles

6. COORDINATION

The following agencies and entities have been involved with the environmental coordination of this project:

- National Marine Fisheries Service (NMFS)
- U.S. Fish and Wildlife Service (USFWS)
- Washington Department of Fish and Wildlife (WDFW)

- The Jamestown S'Klallam Tribe
- Washington State Office of Archaeology and Historic Preservation
- Clallam County

The U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the Jamestown S'Klallam Tribe have visited the site.

7. CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this evaluation. Future federal actions would require additional NEPA evaluation at the time of their development.

There are no significant cumulative effects that can be identified from implementation of this project. There are no known plans to raise the levee to provide an increased level of flood protection. The levee would continue to be maintained at the current level. The Corps knows of no other actions that are reasonably certain to occur within the action area.

Cumulative impacts from local, short-term disturbances caused by the construction project (noise, emissions, traffic disruptions, etc.) would be minor, temporary and not significant.

8. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The irreversible and irretrievable commitment of resources is the use of materials, resources, or land during implementation of an alternative that makes these resources unavailable for other uses, given known technology and reasonable economics.

No federal resources would be irreversibly and irretrievably committed to the proposed action until this Environmental Assessment is finalized and a Finding of No Significant Impact has been signed.

9. ENVIRONMENTAL COMPLIANCE

9.1 National Environmental Policy Act (NEPA) (42 USC 4321 et seq.)

In accordance with the National Environmental Policy Act, federal projects are required to evaluate potential environmental impacts and solicit public comment. The purpose of this document is to solicit public comment and fulfill the Corps of Engineers documentation requirements under the National Environmental Policy Act.

9.2 Endangered Species Act of 1973, as Amended (16 USC 1531-1544)

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed or proposed threatened or endangered species. Prior to Phase 2 construction, a Biological Assessment was prepared for the project. A finding of May Affect, Not Likely to Adversely Affect

was determined for all potentially occurring threatened or endangered fish species. A finding of No Effect was determined for bald eagles.

9.3 Clean Water Act, as Amended (33 USC 1251 et seq.)

According to the Code of Federal Regulations, Title 33, Section 323.4 (a) (2) levee repair is an activity not prohibited by or otherwise subject to regulation under Section 404 of the Clean Water Act. Therefore, a section 401 Water Quality Certification is not required.

9.4 Rivers and Harbors Act (33 U.S.C. 403)

The Rivers and Harbors Act of 1899 prohibits the construction of any bridge, dam, dike, or causeway over or in navigable waters of the United States in the absence of Congressional consent and approval of the plans by the Chief of Engineers and the Secretary of the Army. Under Section 10 of the Rivers and Harbors Act, a navigable waterway is defined as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. This act is not applicable to the proposed project because the levee repair does not restrict navigation or access to navigable waters.

9.5 Coastal Zone Management Act (16 U.S.C. 1451-1465)

The Coastal Zone Management Act of 1972 as amended (15 CFR 923) requires Federal agencies to carry out their activities in a manner, which is consistent to the maximum extent practicable with the enforceable policies of the approved Washington Coastal Zone Management Program.

The proposed action will simply restore the Federal erosion control project to a state comparable to its original condition before damage by the elements occurred. Work will not extend beyond the footprint of the original project, and will not cause substantial adverse effects to shore resources or the environment. Pursuant to Chapter 5.16 of the Clallam County Shoreline Master Program, the Corps believes this proposal is consistent to the maximum extent practicable with the Clallam County Shoreline Master Program.

9.6 National Historic Preservation Act) (16 USC 470 et seq., 110)

Section 106 of the National Historic Preservation Act (36 CFR PART 800) requires that the effects of proposed actions on sites, buildings, structures, or objects included or eligible for the National Register of Historic Places must be identified and evaluated. As required under Section 106 of the NHPA, the Corps is coordinating with the Washington State Office of Archeology and Historic Preservation (OAHP) and the Jamestown S'Klallam Tribe.

There are no known cultural resources in the project area. The disturbed nature of the levee and bank material (imported fill, sediment deposited from the river, or dredged from the river) significantly reduces the chance of finding cultural resources. A cultural resources survey was conducted in the repair area and a cultural resource report was prepared as part of the Section 106 of the National Historic Preservation Act compliance process. A letter from the State Historic Preservation Officer dated 19 July 2004 concurring with the Corps finding of No Historic Properties Affected was received.

9.7 Clean Air Act As Amended (42 USC 7401, et seq.)

The Clean Air Act requires states to develop plans, called State Implementation Plans (SIP), for eliminating or reducing the severity and number of violations of National Ambient Air Quality Standards (NAAQS) while achieving expeditious attainment of the NAAQS. The act also required Federal actions to conform to the appropriate SIP. An action that conforms with a SIP is defined as an action that will not: (1) cause or contribute to any new violation of any standard in any area; (2) increase the frequency or severity of any existing violation of any standard in any area; or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The U.S. Army Corps of Engineers has determined that emissions associated with this project will not exceed EPA's *de minimis* threshold levels (100 tons/year for carbon monoxide and 50 tons/year for ozone).

9.8 Wild and Scenic Rivers Act (16 U.S.C. 1271-1287)

The Wild and Scenic Rivers Act (P.L. 90-542, as amended) selected rivers of the Nation, which, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values. The purpose of the Act is to preserve these rivers in their free-flowing condition, and be protected for the benefit and enjoyment of present and future generations.

An inventory, the National Wild and Scenic Rivers System, was established in December 1, 1992 and is published by the Department of the Interior and the Department of Agriculture, Forest Service and can be found at web site http://www.nps.gov/rivers/wildriverslist.html#wa. The Dungeness River is not one of the selected rivers.

9.9 Migratory Bird Treaty Act and Migratory Bird Conservation Act (16 USC 701-715)

The proposed project would be conducted in such a manner that migratory birds would not be harmed or harassed. The proposed work would be outside the nesting season for most birds. .. Willow plantings will increase beneficial vegetation at the project site.

9.10 Fish and Wildlife Coordination Act, as Amended (16 USC 661 et seq.)

While the proposed project is a Federal water resources development project, private funds were originally used to construct the levee. Since the project is not a Civil Works activity, the Corps' Seattle District policy is that emergency PL84-99 projects do not require FWCA coordination. Given the size and scope of the project, fish and wildlife coordination issues are not expected, which would have resulted in a "No Action" determination by USFWS. Fish and wildlife coordination information and issues, if any, can be provided during the EA public review comment period. The project is in compliance with this act.

9.11 Federal Water Project Recreation Act, as Amended (16 USCA 4612 et seq.)

The Federal Water Project Recreation Act (P.L. 89-72), as amended, requires that full consideration be given to opportunities for fish and wildlife enhancement in investigating and planning Federal water resources projects. The proposed project is consistent with this act.

9.12 Watershed Protection and Flood Prevention Act, as Amended (16 U.S.C. 1001 et seq.)

The Watershed Protection and Flood Prevention Act (Public Law 83-566) is commonly known as the Small Watershed Program. USDA-Natural Resources Conservation Service (NRCS) administers this program. The program authorizes Federal assistance to local organizations for planning and carrying out projects in watershed areas for conservation and use of land and water and flood prevention. This project is not a product of the Small Watershed Program and therefore this act is not applicable to this project.

9.13 Farmland Protection Policy Act (7 U.S.C. 4201, et seq.)

The Farmland Protection Policy Act (Public Law 97-98, Sec. 1539-1549) requires identification of proposed actions that would affect any lands classified as prime and unique farmlands. The proposed project would not affect farmland classified as prime and unique. Repairing the levee would be consistent with this act.

9.14 Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.)

RCRA was enacted in 1976 to address the issue of how to safely manage and dispose of municipal and industrial waste, regulate underground storage tanks (USTs) that store petroleum or hazardous substances, establish a system for managing solid (primarily non-hazardous) waste, including household waste, and set forth the framework for EPA's comprehensive waste management program. No abandoned waste has been observed during project site visits. If abandoned or buried hazardous waste or pesticides were discovered during construction, it would be managed in accordance with RCRA or the Comprehensive Environmental Response, Compensation, and Liability Act requirements, as applicable. Contractor hazardous materials and waste would be managed in accordance with RCRA requirements. The project is in compliance with this act.

9.15 Executive Order 11988, Floodplain Management (24 May 1977)

Executive Order 11988 requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy of the floodplain, and to avoid direct and indirect support of floodplain development where there is a practicable alternative. In accomplishing this objective, “each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains.”

Section 8 of E.O. 11988 notes that the order does not apply to assistance provided for emergency work essential to save lives or protect public property, health, and safety. The project has not constructed a change that would affect occupancy of the floodplain. By repairing the levee breach, the project would be consistent with the E.O. in reducing the risk of flood and minimize the impact of floods on human safety, health, and welfare, while not changing floodplain occupancy conditions.

9.16 Executive Order 12898, Environmental Justice

Executive Order 12898 directs every federal agency to identify and address disproportionately high and adverse human health or environmental effects of agency programs and activities on minority and low-income populations. The project does not involve siting a facility that will discharge pollutants or contaminants, so no human health effects would occur. Therefore the project is in compliance with this act.

9.17 Executive Order 11990, Protection of Wetlands, May 24, 1977

The purpose of this project is to restore the damaged levee and enhance riparian habitat where possible under the constraints of the PL84-99 program. No wetlands would be impacted by this project.

9.18 Treaty Rights

In the mid-1850's, the United States entered into treaties with a number of Native American tribes in Washington. These treaties guaranteed the signatory tribes the right to "take fish at usual and accustomed grounds and stations . . . in common with all citizens of the territory" [*U.S. v. Washington*, 384 F.Supp. 312 at 332 (WDWA 1974)]. In *U.S. v. Washington*, 384 F.Supp. 312 at 343 - 344, the court also found that the Treaty tribes had the right to take up to 50 percent of the harvestable anadromous fish runs passing through those grounds, as needed to provide them with a moderate standard of living (Fair Share). Over the years, the courts have held that this right comprehends certain subsidiary rights, such as access to their "usual and accustomed" fishing grounds. More than *de minimis* impacts to access to usual and accustomed fishing area violates this treaty right [*Northwest Sea Farms v. Wynn*, F.Supp. 931 F.Supp. 1515 at 1522 (WDWA1996)]. In *U.S. v. Washington*, 759 F.2d 1353 (9th Cir 1985) the court indicated that the obligation to prevent degradation of the fish habitat would be determined on a case-by-case basis. The Ninth Circuit has held that this right also encompasses the right to take shellfish [*U.S. v. Washington*, 135 F.3d 618 (9th Cir 1998)]. Native Americans do harvest salmonids from the Dungeness River system.

The proposed project has been analyzed with respect to its effects on the treaty rights described above. We believe that:

(1) The work is not expected to interfere with access to usual and

(2) The work is not expected to cause the degradation of fish runs accustomed fishing grounds or with fishing activities or shellfish harvesting; and habitat; and

Table 2. Summary of Consistency of Project With Applicable Laws, Regulations and Policies

LAWS AND REGULATIONS RELATING TO THE PROPOSED ALTERNATIVES	REQUIREMENT SUMMARIZED	CONSISTENCY OF PREFERRED ALTERNATIVE
National Environmental Policy Act (NEPA)	Requires all federal agencies to consider the environmental effects of their actions and to seek to minimize negative impacts.	Consistent
Clean Air Act	Requires federal agencies to consult with state air pollution control agencies to assure that construction plans conform with local air quality standards	Consistent
Clean Water Act (CWA)	Requires federal agencies to protect waters of the United States. Disallows the placement of dredged or fill material into waters (and excavation) unless it can be demonstrated there are no reasonable alternatives. Requires federal agencies to comply with state water quality standards.	Covered by 33 CFR 323.4 (a) 2
Rivers and Harbors Act	Prohibits the construction of any bridge, dam, dike, or causeway over or in navigable waters of the U.S. in the absence of Congressional consent and approval of the plans by the Chief of Engineers and the Secretary of the Army.	Not in Section 10 jurisdiction
Fish and Wildlife Coordination Act	Requires federal agencies to consult with the US Fish & Wildlife Service on any activity that could affect fish or wildlife.	Not Applicable
Endangered Species Act	Requires federal agencies to protect listed species and consult with US Fish & Wildlife or NMFS regarding the proposed action.	BA submitted to the Services
National Historic Preservation Act	Requires federal agencies to identify and protect historic properties.	Completed
Wild and Scenic Rivers Act	Requires that "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas."	Consistent
Executive Order 11988, Floodplain Management	Requires federal agencies to consider how their activities may encourage future development in floodplains.	Consistent
Migratory Bird Treaty	Requires not harming or harassing	Consistent

Act and Migratory Bird Conservation Act	migratory birds.	
Federal Water Project Recreation Act, as Amended	Requires full consideration for fish and wildlife enhancement opportunities when planning Federal water resources projects.	Consistent
Watershed Protection and Flood Prevention Act, as Amended	Authorizes Federal assistance for implementing projects in watershed areas and use of land and water and flood prevention.	Consistent
Farmland Protection Policy Act	Requires identification of proposed actions that would affect any lands classified as prime and unique farmlands.	Consistent
Resource Conservation and Recovery Act (RCRA)	Requires managing hazardous materials and waste in accordance with RCRA requirements.	Consistent
Executive Order 11990, Protection of Wetlands	Requires federal agencies to protect wetland habitats.	Consistent
Coastal Zone Management Act (CZMA)	Requires federal agencies to comply with state and local plans to protect and enhance coastal zones and shorelines.	Consistent to the maximum extent practicable
Treaty Rights	Requires that the project has been analyzed with respect to its effects on the treaty rights.	Consistent

10. CONCLUSION

Based on the above analysis, the levee rehabilitation project is not a major Federal action significantly affecting the quality of the human environment, and therefore does not require preparation of an environmental impact statement.

11. REFERENCES

Bureau of Reclamation, 2002. "Physical processes, human impacts, and restoration issues of the Lower Dungeness River." Technical Service Center, Denver, CO.

Corps of Engineers. November 13, 1986. *Final Rule for Regulatory Programs of the Corps of Engineers.* Federal Register 51(219): 41206-41254.

Corps of Engineers and Environmental Protection Agency. August 25, 1993. *Clean Water Act Regulatory Programs*. Federal Register 58(163): 45008-45038.

Environmental Protection Agency. November 30, 1993. *Determining Conformity of General Federal Actions to State or Federal Implementation Plans.* Federal Register 58(228): 63214

Washington Department of Ecology. 2000. *Ecology's Final 1998 List of Impaired and Threatened Waterbodies - the 303(d) List.* <http://www.wa.gov/ecology/wq/303d/index.html>.

Williams et al. (1975). A Catalog of Washington Streams and Salmon Utilization, Vol. 1, Puget Sound Region. Washington Department of Fisheries. Olympia. W.A.

13. APPENDICES

Appendix A: Request for Corps Assistance

Dungeness Meadows Homeowners Association, Inc.

November 11, 2003

U.S. Army Corps of Engineers
P.O. Box 3755
4735 East Marginal Way South
Seattle, Wa. 98124-3755

Attn: Van R. Niemi
Subject: Dungeness Meadows Dike

During your recent visit to view the dike we observed a number of large pieces of rip-rap, several the size of toe rock, in the river channel.

We are technically and physically incapable of determining the location of possible damage that occurred during the last high water event of several weeks ago.

We respectfully request the assistance of one of your engineers to identify and assess the severity of the problem and to make recommendations regarding repairs that would be required.

The processing of a hydraulic permit through the various state and county agencies can be very time consuming. If repairs are required we would like to start the permit process with out delay.

Very respectfully yours

Steven E. Funk
Chairman, Dike Committee
370 Dungeness Meadows
Sequim, Wa. 98382

461 DUNGENESS MEADOWS, SEQUIM, WASHINGTON 98382

Appendix B: Project Photographs

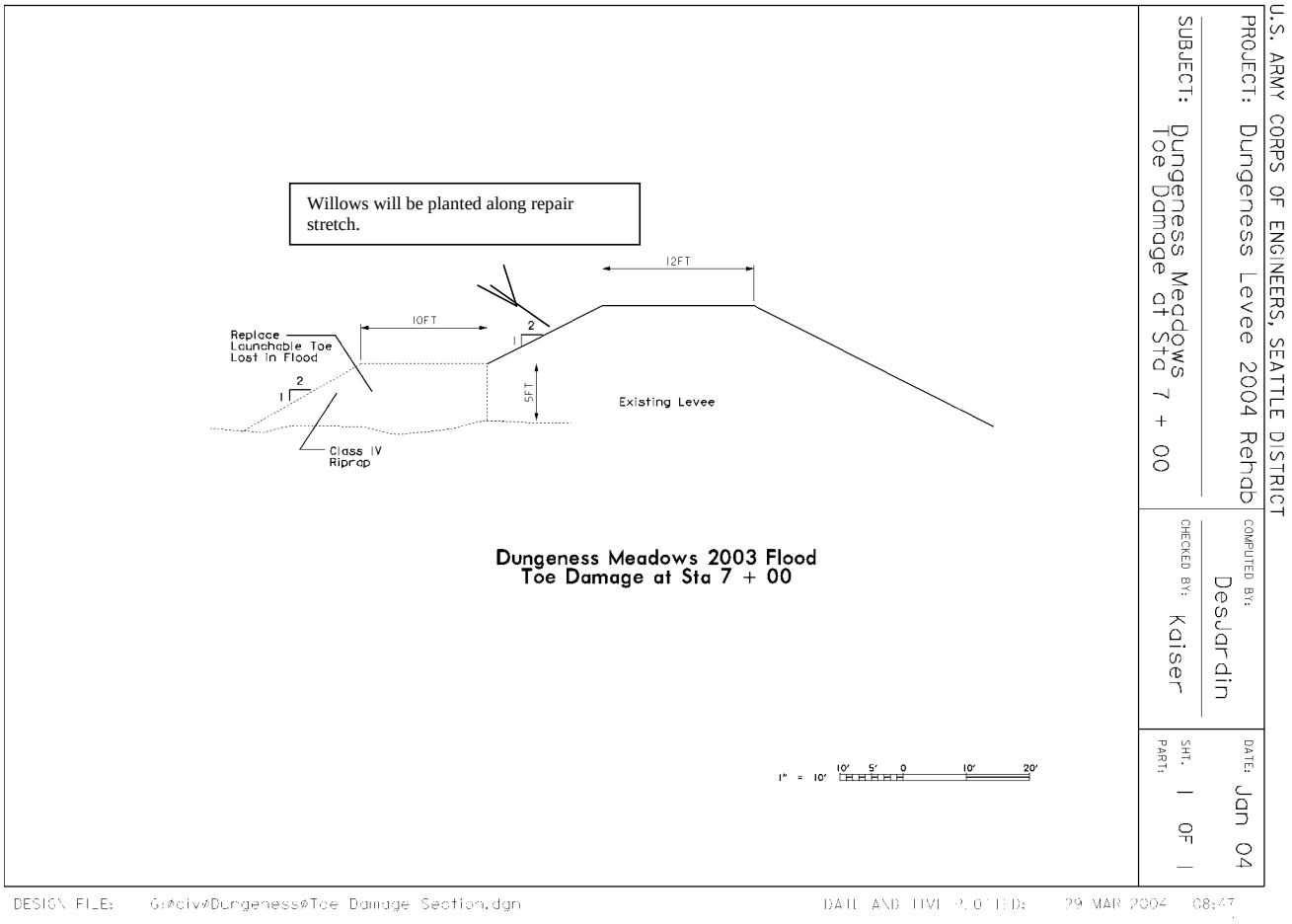
1)Area of damage. Photo taken 5/2004.

2) Staging area.

3) Constructing the interim repair in the dry without any in-water work. Photo taken 11/2004.

4) Interim construction (Phase 1) near completion. Photo taken 11/2004.

Appendix C: Proposed Project Drawing



Appendix E: Draft FONSI

CENWS-PM-PL-ER

REHABILITATION OF FLOOD CONTROL WORKS DUNGENESS MEADOWS LEVEE CLALLAM, WASHINGTON

DRAFT FINDING OF NO SIGNIFICANT IMPACT

1. Background. The Seattle District, U.S. Army Corps of Engineers (Corps) is proposing to repair and reconstruct the Dungeness Meadows levee, located on the Dungeness River near Dungeness, Washington in July 2005. This levee is on the right bank at approximately River Mile 8.0, within the Dungeness Meadows Homeowners Association community. The levee protects 126 residential structures as well as 3 public structures, approximately 13,000 feet of roads and streets, and recreational facilities. The U.S. Army Corps of Engineers, Seattle District, is proposing the following project under the authority of Public Law 84-99 (33 USCA 701n).

The Dungeness River rose above the zero damage flood stage in October 2003, resulting in severe erosion to approximately 600 linear feet of the Dungeness Meadows levee. On 11 November 2003, Corps received a request for emergency assistance from the Dungeness Meadows Homeowners Association. Because of complications with the Dungeness Meadows Homeowners Association acting as a local sponsor, the Corps did not receive approval and project funding for completion of a PL84-99 repair until 20 September 2004. Because protected fish species were present in the river at this time, the Corps decided to proceed with a two-phased construction that would initially place riprap in the dry but also delay in-water construction until the Washington Department of Fish and Wildlife approved in-water work construction window.

2. Purpose and Need. The purpose of this project is to provide protection to the community and infrastructure from flood damage. This section of the levee sustained significant damage by erosion during a flood event in October 2003 and is in need of permanent repair.

There is a high potential that during the next flood event, the river would continue to damage the levee, posing a major threat to community, if no action is taken to repair the levee to necessary level of flood protection. After the proposed project is complete, the levee would prevent damages from a flood with a 100-year recurrence interval with a high degree of certainty.

3. Action. The proposed project will repair the 600-foot section of the levee by utilizing a two-phased construction to regrade the slope and replace the lost toe. In addition, the repair area will be planted with native willows to increase fish and wildlife habitat.

4. Summary of Impacts. The primary impacts of this action will be the temporary and localized increase in noise in the construction area and a temporary, minor increase in turbidity in the river during the in-water work. To minimize the project impacts to vegetation, the project area will be replanted with native willow plantings.

The attached draft environmental assessment provides an evaluation of the proposed levee rehabilitation project and its effects on the existing environment.

No significant adverse impacts to fish and wildlife habitat, air quality, noise, esthetics, historical resources, cultural resources, or the social or economic environment are anticipated as a result of the project.

5. Finding. For the reasons described above, I have determined that the levee rehabilitation project will not result in significant adverse environmental impacts. The project will not constitute a major Federal action with significant impacts on the environment and, therefore, does not require an environmental impact statement.

_____ _____

Date

Debra M. Lewis
Colonel, Corps of Engineers
District Engineer

DIRECTOR/PM-PL-ER

ZIMINSKE/PM-PL-ER

KOMOROSKE/OD-EM

THOMASON/PM-PL

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